

State Compendium - Region 1

Programs and Regulatory Activities Related to Animal Feeding Operations

May 2002

<p>This Document was revised April 2002 from the March 2001 version based solely on new information gathered from the comments submitted by the states regarding the proposed CAFO regulation.</p>
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CHAPTER 1. INTRODUCTION

This compendium has been developed to support the U.S. Environmental Protection Agency's (EPA) efforts to address the environmental and public health problems associated with animal feeding operations (AFOs) and concentrated animal feeding operations (CAFOs). The compendium is a compilation of AFO-related state program and state initiative information intended to illustrate how states are regulating AFOs, with a specific focus on the use of permits or similar mechanisms. This document is not intended as an evaluation of the effectiveness of individual state efforts.

Most of the State programmatic and regulatory information gathered and presented in this document pertains to controlling water quality impacts from AFOs. Although some states have designed regulatory standards to control non-water quality impacts (e.g., setback requirements for odor control), the vast majority of information presented is based on state efforts to address water quality and nutrient management issues.

The *Compendium* has been compiled from a number of publicly available information sources, including:

- Previously published research and existing surveys of State AFO and CAFO programs
- World Wide Web pages of state governments, agencies, and national agriculture organizations
- Select publicly accessible state statutes and regulations (generally accessed via the Web)
- National Pollutant Discharge Elimination System (NPDES) permits developed for CAFOs
- Summaries of State program information provided by EPA regional offices

Based on these sources of publicly available information, the *Compendium* represents a reasonable appraisal of how states are addressing AFO-related environmental problems. Nevertheless, the information presented here is subject to several important limits. First, in compiling this compendium no new formal survey of the states was conducted, nor was a comprehensive review of each state's regulations undertaken, as both were beyond the scope of this task. Thus, in some instances information presented here may be limited or minor gaps may exist. Second, state regulation of AFOs and CAFOs can be complex, involving both federal and state laws and regulations, often originating at the state level from several different agencies, with numerous variations in approaches, requirements, and jurisdiction among the different states. Consequently, different levels of information may be available among states and even between relevant agencies within a state. Finally, the various sources of publicly available information used were reviewed and compiled over a period of time during which many States were reexamining and revising their AFO regulations. As a result, this compendium is by necessity a working document that depicts reasonably current practices, but may in some instances be superseded by recent state programmatic and regulatory changes. The information presented here must be considered subject to these limits and specific regulatory requirements should be verified with state or EPA authorities as appropriate.

The *Compendium of State AFO Programs* consists of four chapters, including this introduction, and three Appendices. Chapter 2 of this document provides a national overview of State AFO initiatives based on the publicly available data. It attempts to summarize how states regulate

AFOs and highlights key aspects of State AFO programs.

Chapter 3 presents individual state profiles. Each profile includes available information addressing: background, lead regulatory agency, state regulations regarding AFO/CAFOs, types of permits, permit coverage, permit conditions, enforcement information, state voluntary programs, additional state-specific information, and references.

Finally, the *Compendium* contains three Appendices. Appendix A describe methods used to develop the *Compendium* and highlights the limits of the data collection efforts. Appendix B lists some of the more frequently used acronyms. Appendix C provides a glossary of useful terms associated with animal feedlots.

CHAPTER 2. NATIONAL SUMMARY OF STATE INITIATIVES

This chapter presents a national overview of state AFO regulatory programs and initiatives based on a review of publicly available data. The discussion begins with a brief review of the respective federal and state roles in administering the National Pollutant Discharge Elimination System (NPDES) program (Section 2.1), followed by a summary of the federal regulations addressing AFOs and CAFOs (Section 2.2). The remainder of this chapter summarizes State Programs/Initiatives (Section 2.3) and Recent State Initiatives/Trends (Section 2.4).

2.1 Overview of EPA/State Roles in NPDES Program

Under the Clean Water Act (CWA), NPDES permits may be issued by EPA or any state authorized by EPA to implement the NPDES program. Currently, 44 states are authorized to administer the base NPDES program.¹ (The base program includes the federal requirements applicable to AFOs and CAFOs, which are discussed below).² To become an authorized NPDES state, the requirements imposed under a State's NPDES program must at a minimum be as stringent as the requirements imposed under the federal NPDES program. The states, however, may impose requirements that are broader in scope or more stringent than the requirements imposed under the federal NPDES program. In states not authorized to implement the NPDES program, the appropriate EPA Regional office is responsible for implementing the NPDES program.

Regarding the regulation of AFOs, 44 of the states authorized to implement the NPDES program have some form of program requirements generally deemed to be as stringent as the federal requirements applicable to AFOs. Yet, it appears that only a handful of states rely solely on their State NPDES regulations to address CAFOs. Rather, most use their NPDES regulations as one part of their CAFO program and supplement these requirements with additional provisions.

Because the federal CAFO regulations constitute the core program requirements in many authorized states and are used for purposes of comparison and summary in this document, these regulations are briefly summarized below.

2.2 Overview of EPA AFO/CAFO Definitions and Effluent Limits, Under the Federal NPDES Program

Under the federal NPDES program, EPA has developed regulations that define which facilities constitute AFOs and which constitute CAFOs. Under these regulations, facilities that constitute CAFOs are defined as point sources for purposes of the NPDES program. No facility may discharge pollutants from a point source to waters of the United States without a NPDES permit.

¹ State NPDES authorization may be obtained for the base program, as well as for components addressing federal facilities, pretreatment, general permits, and sludge. The Virgin Islands is also authorized to administer the NPDES program.

² Alaska, Arizona, Idaho, Massachusetts, New Hampshire, and New Mexico are not authorized to implement the NPDES program. Oklahoma is delegated to implement the NPDES program, however; Oklahoma does not issue a general NPDES permit specifically for CAFOs and is in effect unauthorized to administer the CAFO portion of the NPDES program. Oklahoma CAFOs should apply for coverage under the general NPDES CAFO permit issued by U.S. EPA Region 6 (See 63 FR 53002).

The existing federal regulatory definitions of AFOs and CAFOs are provided at 40 *C.F.R.* § 122.23 and Part 122, Appendix B. These regulations define an AFO as a facility that meets the following criteria:

- Animals have been, are, or will be stabled or confined and fed or maintained for a total of 45 days or more in any 12-month period.
- Crops, vegetation, forage growth, or post-harvest residues are not sustained in the normal growing season over any portion of the lot or facility.³

Federal regulations define a CAFO generally as an animal feeding operation that:

- Confines more than 1,000 animal units (AUs)⁴, or
- Confines between 301 to 1,000 AUs and discharges pollutants:
 - ▶ Into waters of the United States through a man-made ditch, flushing system, or similar man-made device, or
 - ▶ Directly into waters of the United States that originate outside of and pass over, across, or through the facility or otherwise come into direct contact with the animals confined in the operation.

The CAFO regulatory definition also provides that facilities that discharge pollutants only in the event of a 25-year, 24-hour storm event are not defined as CAFOs.

Under existing federal regulations, the permitting authority (e.g., EPA or an authorized state) can designate an AFO as a CAFO upon determining that the operation is a significant contributor of pollution to waters of the United States. This determination, which takes a number of factors into account (e.g., slope, vegetation, and the proximity of the operation to surface waters), is based on an onsite inspection by the agency that issues the permits and is subject to certain discharge conditions.

In addition to the provisions that define AFOs and CAFOs, EPA has promulgated an effluent limitation guideline (ELG) applicable to feedlots (feedlots are defined in the same manner as CAFOs) (see 40 *C.F.R.* § 412). This regulation generally establishes that CAFOs are subject to a zero discharge standard except for discharges, resulting from a catastrophic or chronic storm event, that occur from a properly maintained and operated waste management system designed to control waste and runoff from a 25-year, 24-hour storm.

2.3 State Programs/Initiatives

³ 40 *CFR* 122.23 (b)(1).

⁴ The following examples are animal quantities equivalent to 1,000 animal units: 1,000 slaughter and feeder cattle, 700 mature dairy cattle, 2,500 swine each weighing more than 25 kilograms, 30,000 laying hens or broilers (if a facility uses a liquid manure system), and 100,000 laying hens or broilers (if a facility uses continuous overflow watering). See 40 *CFR* Part 122, Appendix B.

The national summary of state programs and initiatives is divided into four categories: (1) regulatory programs used by states, (2) State definitions of CAFO/AFO, (3) use of general versus individual permits, and (4) key permit conditions.

2.3.1 Regulatory Approach

Figure 1 provides a state-by-state depiction of the AFO permitting mechanisms available in each state. States have five categories of permitting mechanisms:

- Federally Administered NPDES Program
- Federally Administered NPDES Program and State Administered Non-NPDES Program
- State Administered NPDES Program only
- State Administered NPDES Program and State Administered Non-NPDES Program
- State Administered Non-NPDES Program only

As discussed above, 44 states are authorized to implement the base NPDES CAFO program. As illustrated in Figure 1 and summarized in Table 1, of the 44 states authorized to implement the NPDES CAFO program:

- Thirty-two states administer a State NPDES CAFO program in combination with some other state permit, license, or authorization program. Typically, this additional State authorization is a construction or operating permit.
- Seven states regulate CAFOs exclusively under their state NPDES authority (HI, NJ, NV, NY, RI, TN, WV).
- six states have chosen to solely regulate CAFOs under State non-NPDES programs (CO, MI, NC, OR, SC, VA).

Of the six states not authorized to administer the NPDES program:

- Three rely solely on federal NPDES permits to address CAFOs (AK, MA, NH).
- Three impose some form of a state non-NPDES program requirement, although EPA remains responsible for administering the NPDES CAFO requirements in these states (AZ, ID, NM).

While Oklahoma is one of the 44 NPDES-delegated states, Oklahoma does not have a general NPDES permit specific to CAFOs. In this special case, Region 6 administers the portion of Oklahoma's NPDES program that deals with CAFOs by covering Oklahoma CAFOs under the Region 6 general NPDES permit for CAFOs. Oklahoma also uses a State non-NPDES operating permit to regulate state CAFOs.

Overall, 28 states have a combination of permitting mechanisms available for addressing environmental impacts from AFOs. Eleven states exclusively regulate CAFOs under a state or federal NPDES program. Five states (CO, MI, NC, SC and OR) only regulate AFOs under a

state non-NPDES program, with Colorado and Michigan not requiring any AFOs to obtain any form of operating permit.

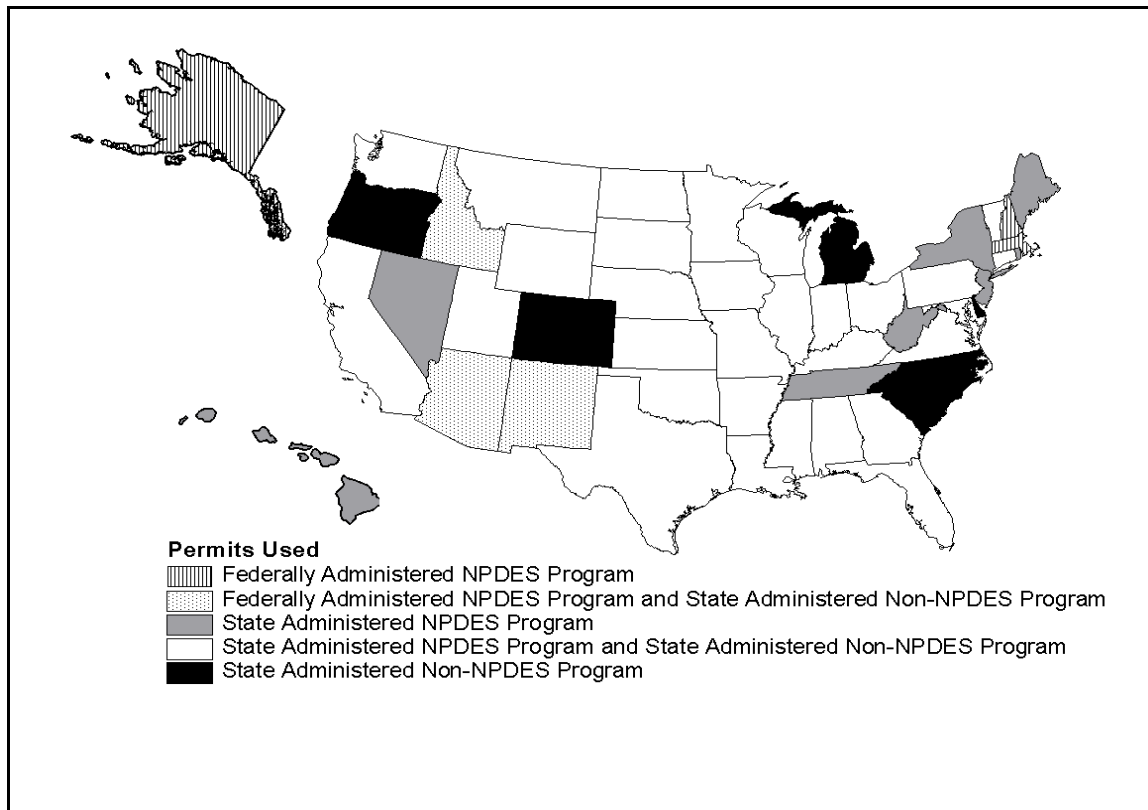


Figure 1. Regulatory Mechanisms for AFO Permitting in Each State

2.3.2 State Definitions of CAFO

EPA and state definitions of a CAFO are important because the definitions determine the scope of the existing federal and state regulatory programs. EPA's definition of a CAFO is based on the length of time animals are confined, the number of animals confined (animal units), and whether or not the facility directly discharges pollutants into waters of the United States. Virtually all state NPDES CAFO programs use the federal definition for CAFO. The vast majority of states also use the federal definition of CAFO for State non-NPDES CAFO programs. Several states, however, use a lower numeric threshold (number of animal units) for non-NPDES permitting. For example, Minnesota issues individual NPDES permits to confined feeding operations as defined by federal regulation and State feedlot permits (non-NPDES) to facilities with more than 10 animal units (calculated by using the formula used in the federal definition).

States that use the federal definition of CAFO may also increase the scope of coverage required through state NPDES programs by reducing the number of animals (number of animal units) a facility can confine before being subject to permitting.

Table 1. Identification of Permit Type and Permit Requirements Within State AFO Programs in the United States¹

State	State NPDES	State Control Mechanism ² (non-NPDES)		General/ Individual Permits				Permit Conditions ³			
		Construction	Operating	NPDES		State non-NPDES		Effluent ⁴	Management	Land Application	
				General	Individual	General	Individual			Agronomic Rates	Offsite
AL	✓	✓	✓	✓	✓			✓	✓	✓	
AK	ND ⁵										
AR	✓	✓	✓	✓		✓	✓	✓	✓	✓	✓
AZ	ND		✓	✓		✓				✓	
CA	✓	✓	✓	✓		✓	✓	✓		✓	
CO	*	✓	✓				✓	✓	✓	✓	
CT	✓	✓			✓		✓	✓	✓	✓	
DE	✓		✓						✓		
FL	✓	✓	✓		✓			✓	✓	✓	
GA	✓		✓	✓	✓		✓		✓	✓	
HI	✓				✓						
IA	✓	✓	✓		✓		✓	✓	✓	✓	✓
ID	ND	✓	✓	✓			✓	✓	✓	✓	✓
IL	✓	✓	✓	✓	✓		✓	✓	✓	✓	
IN	✓	✓	✓		✓				✓	✓	
KY	✓	✓	✓			✓	✓	✓	✓	✓	✓
KS	✓	✓	✓		✓	✓	✓	✓	✓	✓	✓

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State	State NPDES	State Control Mechanism ² (non-NPDES)		General/ Individual Permits				Permit Conditions ³			
		Construction	Operating	NPDES		State non-NPDES		Effluent ⁴	Management	Land Application	
				General	Individual	General	Individual			Agronomic Rates	Offsite
LA	✓		✓		✓		✓	✓	✓	✓	
MA	ND										
MD	✓	✓	✓	✓	✓		✓	✓	✓	✓	
ME	✓		✓		✓			✓	✓	✓	✓
MI	*										
MN	✓	✓	✓		✓		✓	✓	✓	✓	
MO	✓	✓	✓	✓	✓		✓	✓	✓	✓	
MS	✓		✓	✓	✓	✓	✓	✓			
MT	✓	✓	✓	✓	✓	✓	✓	✓		✓	
NE	✓	✓	✓		✓		✓	✓	✓	✓	
NC	*		✓			✓	✓	✓	✓	✓	
ND	✓	✓	✓		✓		✓	✓	✓	✓	
NH	ND										
NJ	✓				✓					✓	
NM	ND		✓				✓		✓	✓	
NV	✓				✓						
NY	✓			✓	✓			✓	✓	✓	

Table 1. Identification of Permit Type and Permit Requirements Within State AFO Programs in the United States¹

State	State NPDES	State Control Mechanism ² (non-NPDES)		General/ Individual Permits				Permit Conditions ³			
		Construction	Operating	NPDES		State non-NPDES		Effluent ⁴	Management	Land Application	
				General	Individual	General	Individual			Agronomic Rates	Offsite
OH	✓	✓	✓	✓	✓		✓	✓	✓	✓	
OK	✓	✓	✓	✓	✓		✓	✓	✓	✓	
OR	*	✓	✓			✓	✓			✓	
PA	✓		✓	✓	✓			✓	✓	✓	✓
RI	✓				✓						
SC	*	✓	✓			✓	✓	✓	✓	✓	
SD	✓	✓	✓	✓	✓		✓	✓	✓	✓	✓
TN	✓			✓	✓			✓	✓	✓	
TX	✓		✓	✓	✓		✓	✓	✓	✓	
UT	✓	✓	✓	✓	✓		✓		✓		
VA	✓		✓			✓	✓	✓	✓	✓	
VT	✓	✓					✓	✓	✓	✓	
WA	✓		✓	✓	✓	✓	✓	✓	✓	✓	
WI	✓	✓	✓	✓	✓			✓	✓	✓	
WV	✓							✓	✓	✓	
WY	✓	✓			✓		✓	✓	✓	✓	
Totals	38	27	36	20	32	12	31	35	38	40	8

Table 1. Identification of Permit Type and Permit Requirements Within State AFO Programs in the United States¹

State	State NPDES	State Control Mechanism ² (non-NPDES)		General/ Individual Permits				Permit Conditions ³			
		Construction	Operating	NPDES		State non-NPDES		Effluent ⁴	Management	Land Application	
				General	Individual	General	Individual			Agronomic Rates	Offsite

¹ Blank data cells indicate that the program element was not a primary component of the state program or information was not sufficient to make a determination.

² State control mechanisms include all forms of formal state approval required to construct or operate an AFO, such as state issued non-NPDES permits, letters of approval, and certificates of coverage.

³ Permit conditions are requirements imposed through either NPDES or state non-NPDES programs.

⁴ Effluent limits refer to whether or not a state imposes federal effluent limits to AFOs/CAFOs (i.e., no discharge allowed except during 25 year, 24- hour storms). A check could indicate that a state imposes effluent limits that are more strict than the federal requirements (e.g., Arkansas does not allow any discharges regardless of storm events).

⁵ ND = States not authorized to administer the NPDES program.

* Although authorized to administer the NPDES program, the state chooses to use a separate program to address AFOs.

Some states have unique definitions for their livestock regulatory programs that do not follow the federal definition (See Table 2). States typically base their definition on number of animals confined, weight of animals and design capacity of waste control system, or gross income of agricultural operation. These definitions are exclusively applied to State non-NPDES programs.

Table 2. Selected State CAFO Definitions that Differ from the EPA Definition and Use of the Definition in Regulatory Control

State	Classification Scheme	Facilities Subject to State Non-NPDES Regulatory
Indiana	Number of animals	Operation with 600 swine, 300 cattle, or 30,000 birds
Iowa	Weight of animals in a confinement feeding operation	Permitting threshold for construction permit based on type of waste control system and design capacity (based on weight) of that system (e.g., an anaerobic lagoon with a design capacity of 400,000 lbs of bovine requires construction permits)
Kansas	Number of animals	Operations with 300 animal units
Maryland	Gross income and animal units	All agricultural operations with incomes of at least \$2,500 or eight animal units
North Carolina	Number of animals	Operations designed for 100 head of cattle, 75 horses, 250 swine, 1,000 sheep, or 30,000 birds

One important difference between state livestock regulatory programs and the federal program is that numerous states have addressed the issue of authority to issue permits (or other control mechanisms) to CAFOs by requiring that all or a specified subgroup of CAFOs regardless of whether they have a direct point source discharge of pollutants to U.S. waters obtain a permit.⁵ This requirement is imposed under state, not federal regulations.

For example, Arkansas requires all AFOs that use a liquid waste management system to obtain permit coverage under either the State-issued general permit or an individual permit. AFOs with dry waste management systems are not automatically required to obtain a permit; however, all facilities with more than 1,000 animal units are subject to coverage under the State's general permit. This is an important distinction because states have opted to expand the scope of facilities that fall within the definition of a CAFO by eliminating the requirement that a facility must have a discharge before being considered a CAFO. In other words, states are requiring large facilities with a potential to discharge to abide by CAFO rules.

2.3.3 General/Individual Permits

The regulation of CAFOs is challenging, in part, because of the large number of facilities across the country. In 1995 it was estimated that 450,000 operations nationwide confined or concentrated animals, of which a very conservative estimate indicated that at least 6,600 had

⁵ Preliminary data indicate that the following states require all or a subset of CAFOs (under various definitions) to obtain permits: AL, AR, AZ, CO, DE, IA, ID, IN, KS, KY, MN, MS, NC, OH, OR, SC, WY.

more than 1,000 animal units and may have been considered CAFOs under the federal definition⁶. More recent estimates describe an AFO universe of approximately 375,700 operations of which approximately 12,600 are AFO operations with more than 1,000 AUs, 26,500 are AFO operations with 300-1,000 AUs, and 336,600 are AFO operations with fewer than 300 AUs.⁷ One way of reducing the administrative burden associated with permitting such large numbers of facilities is through general permits. Existing regulations provide that general permits may be issued to cover a category of discharges within a geographic region. Within such areas, general permits may regulate either storm water point sources or a category of point sources that involves similar operations with similar wastes. Operations subject to the same effluent limitations and operating conditions, and requiring similar monitoring, are most appropriately regulated under a general permit. EPA and the states are using general permits to regulate CAFOs, and this trend appears to be increasing. South Dakota, for example, has established two general permits for CAFOs, one to address swine operations and another for all other livestock.

Of the 44 states authorized to implement the NPDES program:

- Twenty have issued a State NPDES general permit for CAFOs (this number excludes federally issued general permits).
- Twelve have issued a state non-NPDES general permit for CAFOs.

Of the six states not authorized to administer the NPDES program (this excludes Oklahoma), four are subject to a federal general permit.⁸

2.3.4 Permit Conditions

Normally, a NPDES permit will include several types of permit conditions, including technology-based effluent limits (i.e., zero discharge except for discharges resulting from chronic or catastrophic rainfall events if a facility is designed to hold process wastewater and runoff from a 25-year, 24-hour storm for CAFOs subject to § 412), water quality-based effluent limits (if the technology-based limit will not ensure compliance with State water quality standards), monitoring and reporting conditions, special conditions (e.g., conditions that impose additional controls beyond numeric limits, such as best management practices [BMPs]), and standard conditions (e.g., duty to comply, duty to ensure proper operation, and duty to provide information).

The federal technology-based effluent limit for CAFOs is “no discharge.” The effluent limit includes an exception in the event of chronic or catastrophic rain for facilities that have been

⁶ *Animal Agriculture: Information on Waste Management and Water Quality Issues*, General Accounting Office, 1995.

⁷ 66 FR 2985, January 12, 2001.

⁸ CAFOs in New Mexico and Oklahoma are subject to an EPA Region 6 general permit; facilities in Idaho and Alaska are subject to an EPA Region 10 permit, although no facilities are covered under a NPDES permit in Alaska; and CAFOs in Arizona are subject to an EPA Region 9 general permit, although no facilities are covered under the general permit. New Hampshire, and Massachusetts are located in EPA Region 1, which does not have a general NPDES permit for CAFOs.

designed, constructed, and operated to contain all waste water and runoff from a 25-year, 24-hour storm. States not authorized to implement the NPDES program must use this federal effluent limit.

Authorized states generally are equally as stringent, but may be more stringent. Based on a review of available data, of the 44 states authorized to implement the NPDES program 34 use the federal effluent limitation guideline and 6 use a more stringent limit.

Some states with more stringent effluent limits may partially or totally prohibit discharges related to storm events. In Arkansas, for example, the effluent limit prohibits discharges from liquid waste management systems, including periods of precipitation greater than the 25-year, 24-hour storm event. California requires no discharges from new waste control structures even during 100-year storms. And in Iowa, confinement feeding operations (i.e., roofed AFOs) are prohibited from any direct discharge and must dispose of manure in a manner that will not cause a pollution of surface or ground water.

A key concern regarding the management of CAFO waste is ensuring appropriate land application. Land application is the primary management practice used by CAFOs to dispose of animal waste. Several estimates indicate that 90 percent of CAFO-generated waste is land applied. Where properly done, land application of CAFO waste fosters the reuse of the nitrogen, phosphorus, and potassium in these wastes for crop growth. However, where such wastes are excessively or improperly applied, land application can contribute to water quality impairment. Thirty-four states impose requirements addressing land application either through NPDES or non-NPDES programs. Typical requirements include that CAFO waste be applied at agronomic rates and that CAFO operators develop Waste Management Plans.

The breakout of state requirements is as follows:

- Forty states require that CAFO waste be land applied at agronomic rates.
- Thirty-eight states require the development and use of Waste Management Plans.
- One state, Georgia, issues land application system (LAS) permits.

Agronomic rates are typically based on the nitrogen needs of crops, although some states specify that waste be applied at agronomic rates for nitrogen and phosphorous. The determination of agronomic rates varies from state to state. Some states do not address how agronomic rates should be determined, while others, such as Colorado, require CAFO operators to complete detailed plans and field sampling to determine the appropriate amount of waste that can be land applied.

The complexity and details required in a waste management plan also vary among states. Some states do not explicitly identify what items must be addressed in a waste management plan, whereas others have detailed requirements. Typically, CAFO operators are required to address these items in a waste management plan:

- Estimates of the annual volume of waste.
- Schedules for emptying and applying wastes.
- Rates and locations for applying wastes.
- Provisions for determining agronomic rates (i.e., soil testing).

- Provisions for conducting required monitoring and reporting.
- Written agreements with landowners to accept liquid waste.

2.4 Recent State Initiatives/Trends

One clear indication that states have an increasing interest in expanding their efforts to control water quality impacts from AFOs is the promulgation of new state AFO laws, regulations and program initiatives. At least 28 states have developed new laws or regulations related to AFOs since 1996. For example, Kansas, Kentucky, North Carolina, and Wyoming passed legislation regarding swine facilities, with Kentucky and North Carolina imposing moratoriums on the expansion of swine AFOs until state management/regulatory plans could be developed. Mississippi also has imposed a 2-year moratorium on any new CAFOs.

Alabama's recent efforts include developing an NPDES general permitting rule and a Memorandum of Agreement outlining state agency responsibilities as they relate to AFOs. Washington's Dairy Law subjects all dairy farms with more than 300 animal units to permitting and requires each facility to develop NRCS-approved nutrient management plans. Indiana's Confined Feeding Control Law also requires AFOs to develop waste management plans and receive state approval for operating AFOs.

2.5 Summary

State efforts to manage AFOs are carried out through issuance of NPDES permits and state issued non-NPDES permits and/or authorizations. State AFO regulatory programs are directed in large part at controlling the potential environmental impacts on surface water, but also at protecting ground water and managing industry growth. State permits and/or authorization requirements are often imposed regardless of NPDES requirements. State non-NPDES AFO programs are often more stringent than NPDES programs and state efforts often extend coverage to smaller classes of AFOs. Further, the implementation of state non-NPDES programs often receives more agency attention than the implementation of NPDES programs, with several states actively choosing not to use NPDES permits.

While specific state efforts relating to AFOs vary, most states regulate facilities through permitting programs that require animal waste disposal systems to be constructed to prevent the discharge of animal wastes to waters of the United States. Coverage under state permitting programs depends on such criteria as facility size, potential for discharge, type of facility, and type of waste control. Information indicates that state agencies are increasing their commitment of resources to address environmental concerns from AFOs.

CHAPTER 3. STATE PROFILES

This chapter presents individual profiles of state programmatic and regulatory efforts addressing AFOs for each of the 50 states. These profiles provide a state-by-state summary of the key elements within State AFO regulatory programs. The profiles summarize existing State activities to address environmental and health impacts from AFOs. The profiles provide a comprehensive overview of each State program, including the following:

- A description of the lead regulatory agency(ies) (i.e., permitting authority) and agency(ies) responsible for directing voluntary programs.
- State regulations that address AFOs and voluntary programs that encourage regulatory compliance or the use of best management practices.
- The types of permits issued and the permitting processes for each state, the circumstances for which permits are required (i.e., permit coverage), and the requirements and responsibilities of AFO owners and operators (i.e., permit conditions).
- State enforcement activities, inspection programs, and staffing and funding levels dedicated to addressing AFOs.
- Examples of innovative or interesting state projects or programs to control the potential negative environmental impacts of AFOs.

If information on a particular program element was not readily available, or not identified, the following phrase was used: “no information was found in publicly available sources.” Figure 3.1 presents the outline used for each of the state profiles.

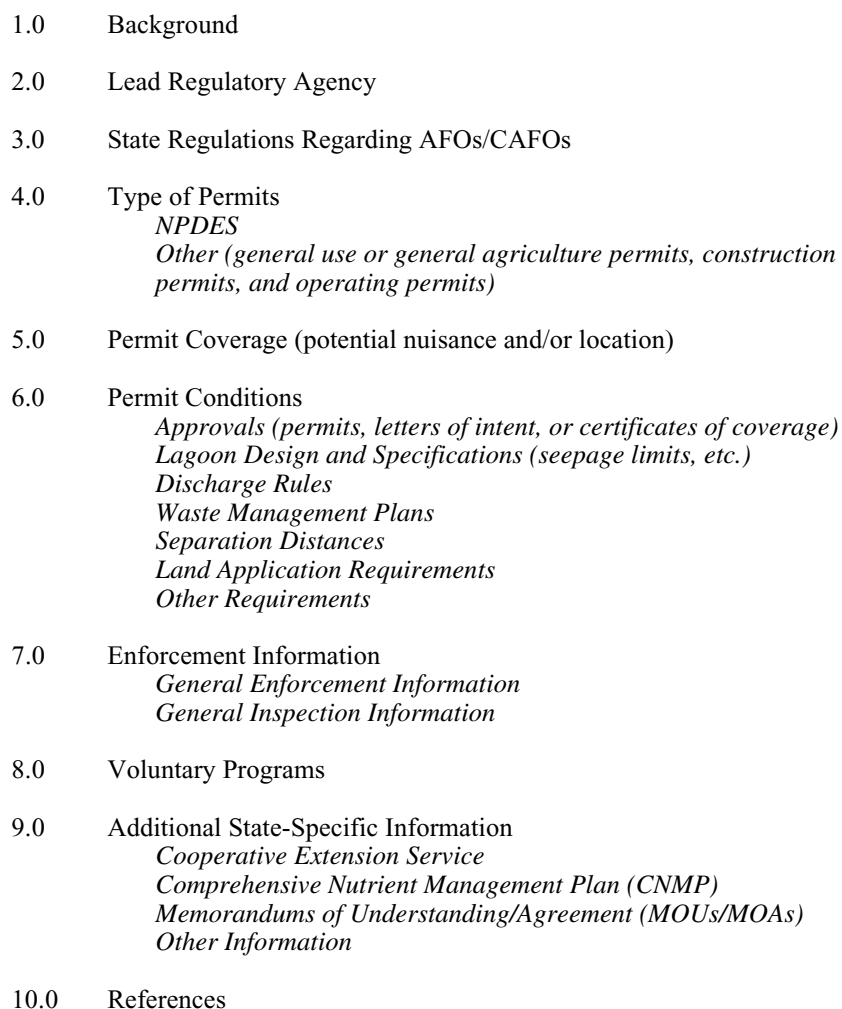
- 
- | | |
|------|--|
| 1.0 | Background |
| 2.0 | Lead Regulatory Agency |
| 3.0 | State Regulations Regarding AFOs/CAFOs |
| 4.0 | Type of Permits
<i>NPDES</i>
<i>Other (general use or general agriculture permits, construction permits, and operating permits)</i> |
| 5.0 | Permit Coverage (potential nuisance and/or location) |
| 6.0 | Permit Conditions
<i>Approvals (permits, letters of intent, or certificates of coverage)</i>
<i>Lagoon Design and Specifications (seepage limits, etc.)</i>
<i>Discharge Rules</i>
<i>Waste Management Plans</i>
<i>Separation Distances</i>
<i>Land Application Requirements</i>
<i>Other Requirements</i> |
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Figure 3.1 Outline for Profiles of State Programs and Regulatory Activities Related to Animal Feeding Operations

Connecticut's CAFO Program

1.0 Background

Based on information provided to EPA by USDA, there are 45 AFOs with from 300 to 1,000 animal units and 9 AFOs with more than 1,000 animal units in Connecticut. These are primarily in the dairy livestock sector (USDA, 1999; USDA, 2000).

Connecticut has not issued any NPDES permits to CAFOs; rather, the state issues individual agriculture permits to problem facilities. According to the Connecticut Nonpoint Source Management Program, the Connecticut Department of Environmental Protection (DEP) will establish and implement an AFO/CAFO permitting system consistent with the new NPDES AFO/CAFO permitting strategy by January 31, 2005. Additionally, DEP will coordinate the development and implementation of nutrient management plans for agricultural operations not subject to the state's Coastal Nonpoint Pollution Control Program and NPDES AFO/CAFO permitting requirements, with 50 percent coverage by December 31, 2004, and 100 percent by December 31, 2014 (Connecticut DEP, n.d.).

2.0 Lead Regulatory Agency

The Connecticut Department of Environmental Protection (DEP) administers a regulatory program that addresses waste management issues associated with agricultural operations (Voorhees, 1997). More information about DEP can be found at <http://dep.state.ct.us/>.

3.0 State Regulations Regarding AFOs/CAFOs

Connecticut CAFOs are exempt from air quality regulations if they are following best management practices (BMPs).

4.0 Types of Permits

NPDES

Connecticut is approved to issue federal NPDES permits. Facilities are regulated on a case-by-case basis. Connecticut DEP supports issuing a general discharge permit to AFOs/CAFOs, but the agricultural community resists this (Voorhees, 1997).

Other

The state issues individual agricultural permits to problem facilities. The type of permit issued depends on local requirements. Permits are also required for new facilities and structures (NASDA, 1997). The Department of Agriculture also issues Intensive Poultry Operation permits.

5.0 Permit Coverage

No NPDES permits have been developed and issued to CAFOs.

6.0 Permit Conditions

Approvals

Approvals are required for new, small operations. New operations must have a site appraisal before construction.

Lagoon Design and Specifications

Facilities are required to follow design standards if they have permits or receive cost-share assistance. Certain requirements are placed on waste storage structures (NASDA, 1997):

- State and federal approval must be obtained.
- Structures must be 2 to 4 feet from ground water sources.
- Lagoon liners should follow Natural Resources Conservation Service (NRCS) specifications, but clay liner is optional with state approval.
- Storage structure capacity must meet NRCS standards.
- Lagoon seepage limits are based on state or federal requirements.

Discharge Rules

Connecticut DEP and Connecticut Extension Service are working with NRCS to develop requirements for operations to prevent discharge as a result of a 25-year, 24-hour storm event. They are leaning toward a zero discharge policy (Voorhees, 1997).

Waste Management Plans

Connecticut DEP works with technical service agencies to help farmers develop and implement Agricultural Waste Management Plans (AWMPs), which address manure, contaminated storm water runoff from feeding areas, process waters, and silage leachate. Most AWMPs are applied to dairy operations that do not meet the federal definition of a CAFO. Requirements are placed on facilities on a case-by-case basis (Voorhees, 1997).

Separation Distances

Separation distances between facilities and dwellings, property lines, and water wells are determined on a case-by-case basis. The locality and the type of structure are factors. The required distance from the bottom of a waste structure to ground water is 2 to 4 feet and is subject to state and/or federal approval (NASDA, 1997).

Land Application Requirements

It is recommended that facilities follow resource management plans and BMPs when applying wastes to land. Local notification must be given for diversion of any amount (NASDA, 1997).

7.0 Enforcement Information

General Enforcement Information

No information was found in publicly available sources.

General Inspection Information

State and/or federal compliance visits are required. Violators are also identified through complaints (NASDA, 1997).

8.0 Voluntary Programs

Connecticut DEP is the lead agency for voluntary programs. DEP and the Connecticut Extension Service help farmers voluntarily reduce and prevent pollution of state waters by agricultural wastes (NASDA, 1997; Voorhees, 1997).

DEP encourages agricultural operators to voluntarily comply with waste management regulations by developing and maintaining farm risk management plans (RMPs) and BMPs. NRCS or the University of Connecticut Extension Service are available to help operators design their plan (Voorhees, 1997).

CAFOs may be eligible for Environmental Quality Incentives Program (EQIP) funding and State Environmental Assistance Funding. Available cost-share funds are limited (NASDA, 1997).

9.0 Additional State-Specific Information

Cooperative Extension Service

The University of Connecticut Cooperative Extension System works with DEP to help farmers reduce and prevent water pollution from agricultural wastes. Extension information can be found at www.lib.uconn.edu/CANR/ces/index.html.

Comprehensive Nutrient Management Plan (CNMP) Certification

Connecticut does not have a CNMP preparer certification program.

10.0 References

Connecticut DEP. n.d. *Connecticut Nonpoint Source Management Program Elements*. Connecticut Department of Environmental Protection.
<<http://www.dep.state.ct.us/wtr/nps/npsele.pdf>>. Accessed October 2000.

NASDA. 1997. *Summary Matrix of State Survey on Waste and Manure Management Regulations*. National Association of State Departments of Agriculture.

USDA. 1999. *1997 Census of Agriculture: Geographic Area Series*. U.S. Department of Agricultural Statistics Service, Washington, DC.

USDA. 2000. Specific queries conducted on the 1997 Census of Agriculture published data.

U.S. Department of Agriculture.

Voorhees, Jeanne. U. S. Environmental Protection Agency, Region 1. Summary of state program information sent to Ruth Much (SAIC), fall 1997.

Maine's CAFO Program

1.0 Background

Based upon information provided to EPA by USDA it is estimated that there are 46 AFOs with from 300 to 1,000 animal units and 8 AFOs with more than 1,000 animal units in Maine. These are primarily in the dairy livestock sector (USDA, 1999; USDA, 2000).

Recently, Maine has focused attention on the siting of large animal feeding operations in the state. In January 1999, the Land and Water Resources Council issued a final report to the State Legislature's Joint Standing Committee on Agriculture, Conservation, and Forestry that included recommended draft state legislation for CAFOs. The draft legislation was entitled the Large Concentrated Animal Feeding Operation Act. The draft Act defines CAFOs, sets regulatory requirements, promotes livestock production, and protects the environment and human health. Specific language from this draft act can be found at <http://janus.state.me.us/dep/blwq/agriculture/cafofina.pdf>.

2.0 Lead Regulatory Agency

The Office of Agricultural, Natural, and Rural Resources (OANRR) addresses environmental issues associated with agriculture (OANRR, n.d.). Information about the Office can be found at www.state.me.us/agriculture/oanrr/homepage.htm.

3.0 State Regulations Regarding AFOs/CAFOs

Maine was authorized to administer the NPDES program in January 2001. The state has regulations at Chapters 520-529. Maine's "Manure Law" (17 MRSA 2701-B) establishes rules and standards for proper manure handling, including use of best management practices (BMPs) (OANRR, 1993). Specific language from the law can be found at www.state.me.us/agriculture/oanrr/manurelaw.htm.

Animal Carcass Disposal Rules establish standards for various disposal methods for domestic animal carcasses. These rules provide detailed guidance on methods that allow for proper disposal that minimizes environmental impacts and nuisances (OANRR, n.d.).

Maine has a Nutrient Management Act (Title 7 Agriculture and Animals, Part 10, Chapter 747) that provides information about nutrient management plans, manure spreading, livestock operations permits, penalties, and a number of other topics (Maine, 2000). Specific language from Chapter 747 can be found at <http://janus.state.me.us/legis/statutes/7/title7ch7470sec0.html>.

Maine has also developed legislation to address Nutrient Management Planning (APA 01-001 Chapter 565 Nutrient Management Rules) (USEPA, 1998). Specific text from this legislation can be found at <ftp://ftp.state.me.us/pub/sos/cec/rcn/apa/01/001/001c565.doc>.

4.0 Types of Permits

NPDES

Maine became authorized to administer the NPDES Permit Program January 12, 2001. Thus, responsibility for permitting CAFOs in Maine will transition from EPA Region 1 to the state.

5.0 Permit Coverage

As an authorized NPDES state, Maine CAFO permit application regulations and definitions are consistent with federal requirements.

6.0 Permit Conditions

Maine's Nutrient Management Rule (APA 01-001 Chapter 565) requires nutrient management plans to be prepared by certified preparers. Chapter 565, section 4, requires that owners or operators of a farm that meets the following criteria must have a nutrient management plan (MEDA, 2000):

- Farms that confine and feed more than 50 animal units at a one time
- Farms that use more than 100 tons of manure per year not generated on that farm
- Farms that are the subject of a verified complaint of improper manure handling
- Farms that store or use regulated residuals

7.0 Enforcement Information

General Enforcement Information

Pursuant to 17 MRSA section 2701-B, the Commissioner of Agriculture, Food and Rural Resources responds to complaints of improper storage or handling of manure. If the commissioner identifies a source of manure as a nuisance, and the nuisance is caused by using other than best management practices, the commissioner identifies what BMPs are needed and requires the facility to abide by necessary changes. If the facility responsible for improper manure handling does not adopt BMPs, a written report is referred to the Department of Environmental Protection and the Attorney General. Similarly, if improper manure handling affected water quality and the responsible facility does not adopt BMPs, the matter is referred to the Commissioner of Environmental Protection, noting that a potential water quality violation exists, and the Department of Environmental Protection may respond as appropriate (OANRR, 1993).

General Inspection Information

Inspections are complaint-driven (NASDA, 1997).

8.0 Voluntary Programs

Maine encourages using site-specific BMPs for protection under the state's Right to Farm laws (NASDA, 1997).

9.0 Additional State-Specific Information

Cooperative Extension Service

The University of Maine Cooperative Extension has a Dairy and Livestock Program to help farmers and operators to better manage renewable resources, such as soil, water, nutrients, and crops. Information about the Cooperative Extension and the program can be found at www.umext.maine.edu/ and www.umext.maine.edu/topics/dairy.htm, respectively.

Comprehensive Nutrient Management Plan (CNMP) Certification

Maine's CNMP Preparers Certification Program was implemented in 1999 by the Department of Agriculture, Food, and Rural Resources (section 3). Maine regulation has two types of nutrient management planning (NMP) certification (section 7) (MEDA, 2000):

- Commercial/Public NMP specialist: a person who may develop and approve NMPs for another person and may approve NMPs prepared by another person. Public NMP specialists are public agency employees.
- Private NMP specialist: a person who may develop and approve an NMP only for his or her own operation.

To receive Nutrient Management Planning certification, an applicant must provide proof of certification by a national certifying program for nutrient management planning training approved by the Commissioner, such as (section 7) (MEDA, 2000):

- National Alliance of Independent Crop Consultants
- American Society of Agronomy
- American Registry of Certified Professional in Agronomy, Crops, and Soils

An applicant may also receive certification through a state training and certification program approved by the Commissioner. To receive certification through the state of Maine, an applicant must pass the Nutrient Management Planning Certification Test and must have done one of the following (section 7) (MEDA, 2000):

- Successfully completed a precertification training workshop offered by the Department, University of Maine Cooperative Extension, or other agency approved by the Commissioner.
- Demonstrated a good understanding of agricultural subjects, including soil fertility, crop management, and manure management, from past education, training, or experience by passing a test approved by the Commissioner for this purpose.

Certification is valid for 5 years. To recertify, an applicant must retake the certification exam or earn credits at workshops and seminars designated for this purpose by the Commissioner. The number of credits needed are as follows: 10 for every 5-year recertification interval for Commercial/Public NMP Specialists and 6 for every 5-year recertification interval for Private NMP Specialists (section 7).

Other Information

The Maine Department of Agriculture is working jointly with the Maine Department of Environmental Protection and EPA-New England office on new legislation.

The Department of Environmental Protection has developed guidelines for municipal zoning ordinances related to agriculture. These guidelines dictate the following:

- All spreading or disposing of manure is to be accomplished through the practices recommended in *Maine Guidelines for Manure and Manure Sludge Disposal on Land* (Published by the University of Maine Soil and Water Conservation Commission in 1972).

- Manure must not be stored within 100 feet (horizontal distance) of a great pond classified GPA or within 75 feet of other water bodies or wetlands.
- Spreading or disposal of manure within the shoreland zone requires a Soil and Water Conservation Plan.

10.0 References

Land and Water Resources Council. 1999. *Large Concentrated Animal Feeding Operations (CAFOs)*. Final report submitted to the Joint Standing Committee on Agriculture, Conservation, and Forestry. <<http://janus.state.me.us/dep/blwq/agriculture/cafofina.pdf>>. Accessed October 2000.

Maine. 2000. *Nutrient Management Act, Chapter 747*. <<http://janus.state.me.us/legis/statutes/7/title7ch7470sec0.html>>. Accessed May 2000.

MEDA. 2000. *APA 01-001 Chapter 565 Nutrient Management Rules*. Maine Department of Agriculture. <<http://www.state.me.us/sos/cec/rcn/apa/01/chaps01.htm>> or <<ftp://ftp.state.me.us/pub/sos/cec/rcn/apa/01/001/001c565.doc>>. Accessed October 2000.

MEDEP. 2000. *Bureau of Land and Water Quality, Agriculture Main Page*. Maine Department of Environmental Protection <<http://janus.state.me.us/dep/blwq/ag.htm>>. Accessed October 2000.

NASDA. 1997. *Summary Matrix of State Survey on Waste & Manure Management Regulations*. National Association of State Departments of Agriculture.

OANRR. 1993. *The Manure Law*. Office of Agricultural, Natural, and Rural Resources. <<http://www.state.me.us/agriculture/oanrr/manurelaw.htm>>. Accessed October 2000.

OANRR. n.d. *Homepage*. Office of Agricultural, Natural, and Rural Resources. <www.state.me.us/agriculture/oanrr/homepage.htm>. Accessed October 2000.

USDA. 1999. *1997 Census of Agriculture: Geographic Area Series*. U.S. Department of Agricultural Statistics Service, Washington, DC.

USDA. 2000. Specific queries conducted on the 1997 Census of Agriculture published data. U.S. Department of Agriculture.

USEPA. 1998. *Efforts to Improve Controls on Concentrated Animal Feeding Operations (CAFOs)*. Results of June 1998 Survey of States and Regions compiled by G. Beatty, U.S. Environmental Protection Agency, Office of Water, Washington, DC.

Voorhees, J. Environmental Protection Agency, Region 1. Summary of state program information sent to Ruth Much (SAIC), fall 1997.

Massachusetts's CAFO Program

1.0 Background

Based on information provided to EPA by USDA, there are 90 AFOs with 300 to 1,000 animal units and 7 AFOs with more than 1,000 animal units in Massachusetts. These are primarily in the turkey livestock sector (USDA, 1999; USDA, 2000).

2.0 Lead Regulatory Agency

The Massachusetts Department of Food and Agriculture is the lead regulatory agency regarding CAFOs. Information about the Department can be found at www.massdfa.org/.

3.0 State Regulations Regarding AFOs/CAFOs

The state has an industrial wastewater discharge program, but this program does not address CAFOs (see 314 CMR 3.00, 4.00, and 12.00). In addition, the state has issued ground water permits, but only for the discharge of sanitary sewage (see 314 CMR 4.00 and 5.00).

4.0 Type of Permits

NPDES

Massachusetts is not authorized to administer the federal NPDES Program. Region 1 issued its first NPDES CAFO permit in July 1999 to a dairy operation in Massachusetts.

5.0 Permit Coverage

No information was found in publicly available sources.

6.0 Permit Conditions

No information was found in publicly available sources.

7.0 Enforcement

No information was found in publicly available sources.

8.0 Voluntary Programs

The Massachusetts Department of Food and Agriculture offers a voluntary program called the Agriculture Environmental Enhancement Program (AEEP). This program grants \$200,000 a year to farmers to purchase materials (such as fencing, culverts, seed, and gutters) that will enable them to protect water quality from the potential impacts of agricultural practices (DFA, 2000).

9.0 Additional State-Specific Information

Cooperative Extension Service

The University of Massachusetts Extension has a Crops, Dairy, and Livestock program that

provides information about issues such as grazing, nutrient management, and environmental quality (soil and water quality). Information about the Extension can be found at www.umass.edu/umext/.

Comprehensive Nutrient Management Plan (CNMP) Certification

Massachusetts does not have a comprehensive nutrient management plan (CNMP) preparer certification program.

Other Information

The Massachusetts Department of Environmental Protection, Department of Food and Agriculture, and Coastal Zone Management are working to develop a state strategy (USEPA, 1998).

10.0 References

- DFA. 2000. *Agricultural Environmental Enhancement Program (AEEP): Program Background*. Massachusetts Department of Food and Agriculture. <www.massdfa.org/farmfund.htm>. Accessed October 2000.
- USDA. 1999. *1997 Census of Agriculture: Geographic Area Series*. U.S. Department of Agricultural Statistics Service, Washington, DC.
- USDA. 2000. Specific queries conducted on the 1997 Census of Agriculture published data. U.S. Department of Agriculture.
- USEPA. 1998. *Efforts to Improve Controls on Concentrated Animal Feeding Operations (CAFOs)*. Results of June 1998 Survey of States and Regions compiled by G. Beatty, U.S. Environmental Protection Agency, Office of Water, Washington, DC.
- Voorhees, J. U.S. Environmental Protection Agency, Region 1. Summary of state program information sent to Ruth Much (SAIC), fall 1997.

New Hampshire's CAFO Program

1.0 Background

Based on information provided to EPA by USDA in the year 2000 it is estimated that there are 30 AFOs with 300 to 1,000 animal units and 4 AFOs with more than 1,000 animal units in New Hampshire (USDA, 1999; USDA, 2000).

2.0 Lead Regulatory Agency

The New Hampshire Department of Environmental Services (DES) is notified of improper manure handling practices that cannot be remedied by the Department of Agriculture and takes appropriate regulatory action. Information about DES can be found at www.des.state.nh.us/.

3.0 State Regulations Regarding AFOs/CAFOs

Title 40 Agriculture, Horticulture, and Animal Husbandry, Chapter 431 Soil Conditioners, Sections 33 through 35 (RSA 431:33 through 431:35) regulate the handling of manure, agricultural compost, and chemical fertilizers. Specific language from Chapter 431 can be found at <http://sudoc.nhsl.lib.nh.us/rsa/40/INDEX.HTM#Chapter%20431>.

The New Hampshire Coastal Nonpoint Pollution Control Program adopted agricultural pollution management measures in accordance with section 6217(c)(1) of the Coastal Zone Act Reauthorization Amendments of 1990.

4.0 Types of Permits

NPDES

New Hampshire is not an NPDES-authorized state.

5.0 Permit Coverage

No information was found in publicly available sources.

6.0 Permit Conditions

Permit conditions are not applicable. However, NRCS design standards are used in constructing manure storage facilities, including the 25-year, 24-hour storm capacity of storage ponds.

7.0 Enforcement Information

The commissioner of the Department of Agriculture investigates complaints of improper manure handling, including improper storage and spreading. If the commissioner determines that improper manure management is a nuisance and is caused by failing to use BMPs, the commissioner notifies the operator of necessary changes. If the changes cannot be made within 10 days, the operator must submit a compliance plan to the commissioner. Unresolved problems are referred to the local authorities and the commissioner of environmental services (RSA 431:35). Typically, New Hampshire animal waste management is handled at the local level through conservation districts and NRCS (USEPA, 1998).

8.0 Voluntary Programs

No information was found in publicly available sources.

9.0 Additional State-Specific Information

Cooperative Extension Service

The University of New Hampshire Cooperative Extension has a livestock program, within which continued educational programs help to educate farm owners about environmental stewardship and other important agricultural issues. Information about the Extension and Livestock Program can be found at <http://ceinfo.unh.edu/> and <http://ceinfo.unh.edu/aglivstk.htm>, respectively.

Comprehensive Nutrient Management Plan (CNMP) Certification

New Hampshire does not have a CNMP certification program.

Additional Information

BMPs for manure management were developed in consultation with the NRCS, New Hampshire agricultural experiment station, University of New Hampshire Cooperative Extension Service, and the commissioner of environmental services. The commissioner must publish developed BMPs (RSA 431:34). Operators of confined feeding operations are required to follow published BMPs.

10.0 References

- USDA. 1999. *1997 Census of Agriculture: Geographic Area Series*. U.S. Department of Agricultural Statistics Service, Washington, DC.
- USDA. 2000. Specific queries conducted on the 1997 Census of Agriculture published data. U.S. Department of Agriculture.
- USEPA. 1998. *Efforts to Improve Controls on Concentrated Animal Feeding Operations (CAFOs)*. Results of June 1998 Survey of States and Regions compiled by G. Beatty. U.S. Environmental Protection Agency, Office of Water, Washington, DC.
- Voorhees, J. U.S. Environmental Protection Agency, Region 1. Summary of state program information sent to Ruth Much (SAIC), fall 1997.

Rhode Island's CAFO Program

1.0 Background

Based on information provided to EPA by USDA, there are 66 AFOs with from 300 to 1,000 animal units and no AFOs with more than 1,000 animal units in Rhode Island. These are primarily in the turkey livestock sector (USDA, 1999; USDA, 2000).

2.0 Lead Regulatory Agency

The Rhode Island Department of Environmental Management (DEM) is the lead agency regarding CAFOs (Voorhees, 1997). Information about DEM can be found at www.state.ri.us/dem/.

3.0 State Regulations Regarding AFOs/CAFOs

The Rhode Island Pollution Discharge Elimination System (RIPDES) is used to address CAFOs.

4.0 Types of Permits

NPDES

Rhode Island administers the NPDES through the issuance of state RIPDES permits.

5.0 Permit Coverage

AFOs are identified on a case-by-case basis and through the 1,000 animal unit threshold. A significant point discharge may prompt the state to treat an operation as a CAFO (Voorhees, 1997).

6.0 Permit Conditions

No information was found in publicly available sources.

7.0 Enforcement Information

No information was found in publicly available sources.

8.0 Voluntary Programs

No information was found in publicly available sources.

9.0 Additional State-Specific Information

Cooperative Extension Service

The University of Rhode Island Cooperative Extension does not provide any agricultural programs related to confined animal feedlots. More information about the Extension can be found at www.uri.edu/ce/index1.html.

Comprehensive Nutrient Management Plan (CNMP) Certification

Rhode Island does not have a CNMP preparer's certification program.

10.0 References

USDA. 1999. *1997 Census of Agriculture: Geographic Area Series*. U.S. Department of Agricultural Statistics Service, Washington, DC.

USDA. 2000. Specific queries conducted on the 1997 Census of Agriculture published data. U.S. Department of Agriculture.

Voorhees, Jeanne. U. S. Environmental Protection Agency, Region 1. Summary of state program information sent to Ruth Much (SAIC), fall 1997.

Vermont's CAFO Program

1.0 Background

Based on information provided to EPA by USDA it is estimated that there are 140 AFOs with from 300 to 1,000 animal units and 15 AFOs with more than 1,000 animal units in Vermont. These are primarily in the dairy livestock sector (USDA, 1999; USDA, 2000).

The Vermont Department of Agriculture is working with the Vermont Department of Environmental Conservation to develop a CAFO program based on federal CAFO requirements and new state legislation (Voorhees, 1997). The state intends to work with EPA to develop a CAFO program (USEPA, 1998).

2.0 Lead Regulatory Agency

The Vermont Department of Environmental Conservation (DEC), under the Agency of Natural Resources, is authorized to administer the federal NPDES program (Voorhees, 1997). The Vermont Department of Agriculture, Foods, and Markets (VDAFM) administers the Large Farm Operations (LFO) Rules. Information about DEC, the Agency of Natural Resources, and VDAFM can be found at www.anr.state.vt.us/dec/dec.htm, www.anr.state.vt.us/ and www.state.vt.us/agric/index.htm, respectively.

3.0 State Regulations Regarding AFOs/CAFOs

The state of Vermont passed the Large Farm Operation (LFO) Rules, effective November 23, 1999. These rules establish procedures and standards for the preparation and review of LFO permit applications, as well as the issuance of permits for the operation and expansion of large farms and/or the construction of new buildings for LFOs in the state of Vermont (VDAFM, n.d.). Specific language from the LFO Rules can be found at www.state.vt.us/agric/lforules.htm.

CAFOs are also impacted by performance-based accepted agricultural practices (AAPs), adopted as Title 6, Chapter 215, under Vermont's agricultural nonpoint source pollution reduction program. AAPs apply to all farmers, regardless of the size of the operation. When a farm operates in compliance with AAP standards, the operation is considered to be in compliance with water quality standards (Graves, 2000). Specific language from Title 6, Chapter 215, can be found at www.leg.state.vt.us/statutes/title06/chap215.htm.

4.0 Types of Permits

NPDES

Vermont is authorized to administer the NPDES program. As of 1997, no NPDES permits had been issued to Vermont CAFOs (Voorhees, 1997).

Other

LFO permits are administered by VDAFM (VDAFM, n.d.). A permit is required for the construction or expansion of barns, depending on the number of animals at the facility (NASDA, 1997). No permit is required to replace an existing barn in use for livestock or domestic fowl production at its existing capacity (VSO, n.d.).

5.0 Permit Coverage

LFO permits are required for farms that exceed 950 animal units (AUs) of horses, cattle, and sheep, or 2,375 swine each weighing more than 25 kilograms, or 95,000 laying-hens or broilers (if the facility has a continual flow water system), or 28,500 laying-hens or broilers (if the facility has a liquid manure system), or 4,750 ducks, or 52,250 turkeys if the livestock or domestic fowl are in a barn or adjacent barns owned by the same person, or if the barns share a common border or have a common waste disposal system (VSO, n.d.).

6.0 Permit Conditions

Approvals

No appraisal is required before construction of waste structures (NASDA, 1997).

A permit is required before an operation will be repopulated/populated at 950 animal units or more. If a facility is to construct a new barn where no barn previously existed or expand a barn so it will be capable of housing 950 animal units, a LFO permit is required (DAFM, 1999).

An LFO permit applications must include:

- The existing barn structures, and any proposed new barn or expansion.
- The existing waste management structures or systems and any proposed waste management structures or systems or expansions or modification.
- Existing number of all livestock or domestic fowl in the operation and any proposed increase.
- Method used to calculate AUs
- Nutrient Management Plan which complies with AAPs and accounts for all manure generated by the LFO and any additional manure from other livestock that might be managed at the LFO.
- A certificate from either NRCS or a licensed professional engineer stating that all waste storage/treatment facilities meet NRCS standards.
- A plan that addresses the expected activity of odor, noise, traffic, insects, flies, and other pests (DAFM, 1999).

An informational meeting must be held for LFO projects that propose a new barn. The applicant is responsible for the public notification of the proposed LFO project and the public meeting. The notification must be published in a local newspaper. The applicant must initiate the public notice within one week of being notified by the DAFM that the administrative portion of the application review is complete (DAFM, 1999).

The Department has 45 business days to review the application after it has been determined that the application is complete. After 45 business days, if the Department has not yet determined the status of the application, a permit is awarded to the facility by default (DAFM, 1999).

Lagoon Design and Specifications

Waste lagoons must be constructed according to Natural Resources Conservation Service (NRCS) standards and specifications described in NRCS Field Office Technical Guide Section IV. The storage capacity of lagoons must be able to hold waste generated over a 180-day period and must contain wastes after a 25-year, 24-hour storm event.

Discharge Rules

No discharge is allowed, and wastes from a 25-year, 24-hour storm event must be contained (VSO, n.d.).

Waste Management Plans

Under the LFO Rules, nutrient management plans must address the following [Note: the list is not exhaustive] (VDAFM, n.d.):

- Total amount of manure and other wastes produced
- Number of animal units at other facilities at which the manure is to be land applied
- Method of applying and incorporating wastes, and equipment to do so
- List of land application sites
- Proposed crop and yield information
- Soil tests for 1/3 of the land used for land application at the time of filing the nutrient management plan
- Current manure analysis
- A sample of a daily spreading log sheet
- Compost management and waste product plan
- Crop history
- Application rates
- Field-by-field soil loss tolerance status

To receive the required permit for LFOs, under Title 6, Chapter 215, Section 4851(b), the owner or operator of the regulated farm must demonstrate to the commissioner that the farm has an adequately sized manure management system to accommodate generated wastes and a nutrient management plan to dispose of wastes in accordance with AAPs (VSO, n.d.).

Separation Distances

New structures must be 50 feet from stream banks. Field stacking of manure is not allowed within 100 feet of shallow wells or springs.

Land Application Requirements

Wastes must be land applied at agronomic rates (NASDA, 1997). All wastes generated by the LFO that are transferred to another individual require a contract to guarantee there are no discharges to water. Manure can not be spread in waterways, streams, rivers, lakes, ponds, and water supply wells. All fields used for land application must be sampled once every three years. Each individual field used for land application must have a nutrient management plan developed (DAFM, 1999).

7.0 Enforcement Information

General Enforcement Information

Permittees must comply with all permit conditions. Any permit not in compliance with the LFO Rules is in violation of the permit, which is grounds for enforcement action, permit revocation or modification, or denial of a permit reissuance application, including expansions (VDAFM, n.d.).

For more specific information about enforcement, refer to Title 6, Chapter 215, Section 4854.

General Inspection Information

Violators are identified by complaint and inspections. Routine onsite visits are required (NASDA, 1997). An authorized representative must be allowed to enter the permittee's premises on which a regulated facility or activity is located. The representative will inspect facilities, equipment, and practices regulated by a permit. The inspector may monitor or sample any substance or parameters on the location. The inspector must have access to any records that are required under the conditions of the permit (DAFM, 1999).

8.0 Voluntary Programs

No state educational, training, or technical assistance programs for CAFO operators have been identified for Vermont. The state does not offer incentives (NASDA, 1997). The state does offer a small business compliance assistance program that provides general compliance assistance to businesses with fewer than 100 employees.

9.0 Additional State-Specific Information

Cooperative Extension Service

The University of Vermont Extension has a number of programs, including one for agriculture that seeks to promote Vermont's agriculture by providing information and educational programs to the public. More information about the Extension can be found at <http://ctr.uvm.edu/ext/>.

Comprehensive Nutrient Management Plan (CNMP) Certification

Vermont does not have a CNMP preparer certification program.

10.0 References

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